



# *MICHIGAN*

OFFICE OF THE AUDITOR GENERAL

## AUDIT REPORT



THOMAS H. MCTAVISH, C.P.A.  
AUDITOR GENERAL

“...The auditor general shall conduct post audits of financial transactions and accounts of the state and of all branches, departments, offices, boards, commissions, agencies, authorities and institutions of the state established by this constitution or by law, and performance post audits thereof.”

– Article IV, Section 53 of the Michigan Constitution

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# Michigan *Office of the Auditor General* **REPORT SUMMARY**

## *Performance Audit*

## *Michigan State University*

Report Number:  
33-150-02

Released:  
July 2005

*Michigan State University was established by Act 130, P.A. 1855, as the Agricultural College of the State of Michigan. The University was the nation's first agricultural college and one of its first land-grant universities. The University's mission is to seek, to teach, and to preserve knowledge through excellence in research, teaching, and outreach. The University accomplishes its mission by offering a comprehensive spectrum of programs to students of varying interests, abilities, backgrounds, and expectations.*

### ***Audit Objective:***

To assess the effectiveness of the University's efforts to administer its capital construction and renovation projects.

### ***Conclusion:***

We concluded that the University's efforts to administer its capital construction and renovation projects were generally effective.

### ***Reportable Conditions:***

The University needs to improve its review of contractor billings. Also, the University needs to revise construction contract provisions related to contractor overhead and profit billings. (Finding 1)

The University needs to ensure that architects and construction contractors purchase and maintain insurance and performance and payment bonds required by contract (Finding 2).

The University did not submit use and finance statements to the Joint Capital Outlay Subcommittee for some non-State-

funded capital outlay projects exceeding \$1 million (Finding 3).

The University needs to develop more consistent and formal post-evaluations of its construction projects (Finding 4).

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### ***Audit Objective:***

To assess the effectiveness and efficiency of the University's use of selected instructional resources.

### ***Conclusion:***

We concluded that the University's use of selected instructional resources was generally effective and efficient.

### ***Reportable Conditions:***

The University needs to ensure that faculty members submit sabbatical leave reports as required by University policy (Finding 5).

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***Agency Response:***

Our audit report contains 5 findings and 7 corresponding recommendations. The University's preliminary response indicated that it agrees with all 7 recommendations.

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<http://audgen.michigan.gov>



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AUDITOR GENERAL

July 29, 2005

Mr. David L. Porteous, Chair  
Board of Trustees  
and  
Ms. Lou Anna K. Simon, President  
Michigan State University  
East Lansing, Michigan

Dear Mr. Porteous and Ms. Simon:

This is our report on the performance audit of Michigan State University.

This report contains our report summary; description of agency; audit objectives, scope, and methodology and agency responses; comments, findings, recommendations, and agency preliminary responses; various exhibits, presented as supplemental information; and a glossary of acronyms and terms.

Our comments, findings, and recommendations are organized by audit objective. The agency preliminary responses were taken from Michigan State University's responses subsequent to our audit fieldwork. Annual appropriations acts require that the audited institution develop a formal response within 60 days after release of the audit report.

We appreciate the courtesy and cooperation extended to us during this audit.

Sincerely,

A handwritten signature in black ink that reads "Thomas H. McTavish".

Thomas H. McTavish, C.P.A.  
Auditor General



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## Description of Agency

Michigan State University was established by Act 130, P.A. 1855, as the Agricultural College of the State of Michigan. The State Constitution, approved in April 1963, gave the University its current name. The University was the nation's first agricultural college and one of its first land-grant universities. The University is governed by an eight-member Board of Trustees elected by the people of the State of Michigan to eight-year terms.

The University's mission\* is to seek, to teach, and to preserve knowledge through excellence in research, teaching, and outreach. The University accomplishes its mission by offering a comprehensive spectrum of programs to students of varying interests, abilities, backgrounds, and expectations. For academic year 2002-03, the University offered more than 150 undergraduate and numerous graduate programs through 14 academic colleges. For fall semester 2002, the University enrolled 44,937 students.

The University is accredited by the North Central Association of Colleges and Schools. In addition, individual programs within the University's colleges are accredited by various professional accrediting bodies.

The University's main campus is located on 5,200 acres in East Lansing. The developed campus comprises 2,044 acres, with the remaining acres devoted to experimental farms, outlying research facilities, and natural areas. The University also owns 15,000 acres throughout Michigan, which are devoted to agricultural, animal, and forestry research. The University operates 660 buildings, including 85 buildings with instructional space and the largest residence hall system in the nation.

As of April 30, 2003, the University employed 4,213 full-time equivalent (FTE) faculty and academic staff and 5,893 FTE nonacademic support staff. For the fiscal year ended June 30, 2002, the University reported revenues and expenses of \$1.26 billion (Exhibit 1) and \$1.25 billion (Exhibit 2), respectively.

\* See glossary at end of report for definition.

## Audit Objectives, Scope, and Methodology and Agency Responses

### Audit Objectives

Our performance audit\* of Michigan State University had the following objectives:

1. To assess the effectiveness\* of the University's efforts to administer its capital construction and renovation projects.
2. To assess the effectiveness and efficiency\* of the University's use of selected instructional resources.

### Audit Scope

Our audit scope was to examine the program and other records of Michigan State University. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

As part of our audit, we prepared, from information compiled by the University, supplemental information (Exhibits 1 through 5) that relates to our audit objectives. Our audit was not directed toward expressing an opinion on this information and, accordingly, we express no opinion on it.

### Audit Methodology

Our audit procedures, performed from June 2002 through May 2003, included an examination of the University's records and activities primarily for the period July 1, 1999 through December 31, 2002.

We conducted a preliminary review of the University's operations to formulate a basis for defining the audit scope. As part of our preliminary review, we interviewed University personnel, reviewed policies and procedures, analyzed available data and statistics, reviewed reference materials, and obtained an understanding of selected areas of the University's management control\* and operational and academic activities related to admissions, orientation, placement testing, remedial course

\* See glossary at end of report for definition.

recommendations, student transfer credit evaluations, advising, course prerequisites, and auxiliary services cost allocations. Also, we examined data related to student enrollment and graduation and job placement services. Further, we reviewed the University's methods for ensuring the quality of its academic programs and the extent to which it used student and employer surveys. Also, we reviewed the University's deferred maintenance plans.

To accomplish our first objective, we assessed the University's compliance with selected State and University policies and procedures and contract provisions related to capital construction and renovation projects. In addition, we evaluated the effectiveness of the University's administration of selected capital construction and renovation projects.

To accomplish our second objective, we analyzed the University's policies, procedures, and data related to program and degree offerings, class section sizes, classroom utilization, academic progress\*, repetitive course enrollments\*, and faculty utilization, including work loads and sabbatical leaves. Also, we evaluated the University's methods for ensuring the effectiveness of its instructors.

### Agency Responses

Our audit report contains 5 findings and 7 corresponding recommendations. The University's preliminary response indicated that it agrees with all 7 recommendations.

The agency preliminary response that follows each recommendation in our report was taken from the University's written comments and oral discussion subsequent to our audit fieldwork. Annual appropriations acts require the principal executive officer of the audited institution to submit a written response to our audit to the Auditor General, the House and Senate Fiscal Agencies, and the State Budget Director. The response is due within 60 days after the audit report has been issued and should specify the action taken by the institution regarding the audit report's recommendations.

\* See glossary at end of report for definition.

# COMMENTS, FINDINGS, RECOMMENDATIONS, AND AGENCY PRELIMINARY RESPONSES

## **ADMINISTRATION OF CAPITAL CONSTRUCTION AND RENOVATION PROJECTS**

### **COMMENT**

**Audit Objective:** To assess the effectiveness of Michigan State University's efforts to administer its capital construction and renovation projects.

**Conclusion:** We concluded that the University's efforts to administer its capital construction and renovation projects were generally effective. However, we noted reportable conditions\* related to contractor billings, insurance and bonds, Joint Capital Outlay Subcommittee (JCOS) approval, and post-evaluations of construction projects (Findings 1 through 4).

### **FINDING**

#### **1. Contractor Billings**

The University needs to improve its review of contractor billings. Also, the University needs to revise its construction contract provisions related to contractor overhead and profit billings. Improved billing reviews and revised contract language would help the University ensure that it does not pay more than it should for construction projects.

Our review of selected payments and contracts for two construction projects disclosed:

- a. The University's billing review did not identify duplicate billings and other questionable charges on contractor billings prior to payment. Our review of 14 payments totaling approximately \$790,000 on the Shaw Hall Exterior Project (a cost plus contract\*) disclosed:
  - (1) The contractor overcharged the University \$12,929 by submitting duplicate invoices with its billings. For example, the contractor included the same subcontractor's \$4,357 invoice on two different billings. The University paid the contractor without detecting the overcharge. Moreover, \$3,508 of the subcontractor's invoice was related to disposal of materials for a separate project that the University had already paid for.

\* See glossary at end of report for definition.

- (2) The University did not verify the appropriateness of \$24,116 in labor charges associated with the contractor's warehouse staff. The project bid instructions, which are incorporated into the construction contract, preclude payment for contractor employees stationed at the contractor's office(s), except for employees involved in the fabrication of project materials. The University did not have documentation that the contractor's warehouse staff were also involved in the fabrication of project materials.
  - (3) The University did not obtain and review the contractor's payroll and payroll related records to verify the propriety of the contractor's labor charges, which accounted for \$497,327 (63.0%) of the project expenditures. The contractor's hourly labor charges included the base wages it paid to employees plus employee fringe benefit and other payroll related costs. To help ensure the propriety of contractor billings, the University should verify that the contractor correctly calculated its hourly labor rates based on mutually agreed upon costs and that the reported hours worked by and wages paid to contractor employees are supported by certified payroll records.
- b. The terms of the construction contract for the Bio-Physical Sciences Building did not prohibit the contractor from billing the University for supervising work of a subsidiary subcontractor. The contract allowed the contractor to bill the University 15% overhead and profit on its own work and to bill the University 5% overhead and profit for supervising the work of its subcontractors. However, the contract did not account for subsidiary relationships. Our review of \$1.6 (22.9%) million of \$7.0 million in contract change orders disclosed that the University paid the contractor \$19,578 in overhead and profit for supervising the work of its subsidiary (in effect, its own work). This was in addition to the 15% that the subsidiary received for overhead and profit. Including contract provisions that prohibit contractors from charging overhead and profit to supervise the work of their subsidiary subcontractors helps to ensure that the subcontracting arrangements are made at arm's length without the opportunity to add additional overhead and profit to the billings.

## **RECOMMENDATIONS**

We recommend that the University improve its review of contractor billings.

We also recommend that the University revise its construction contract provisions related to contractor overhead and profit billings.

We further recommend that the University seek reimbursement for the identified overpayments.

## **AGENCY PRELIMINARY RESPONSE**

The University agrees with the recommendations and informed us that it has sought and received reimbursement for the identified overpayment. The University informed us that it will clarify contract language related to contractor overhead and profit billings in future agreements. The University maintains that it and the contractors acted appropriately and in compliance with the contracts in the projects cited in the finding; however, the audit did identify areas that would enhance the University's effectiveness and efficiency.

## **FINDING**

### **2. Insurance and Bonds**

The University needs to ensure that architects and construction contractors purchase and maintain insurance and performance and payment bonds required by contract.

Insurance and performance and payment bonds reduce the University's risk related to property damage and liability claims and for nonperformance or nonpayment by architects and construction contractors. Obtaining and maintaining documentation of architects' and construction contractors' insurance and performance and payment bonds is necessary for the University to ensure that such coverages exist.

Contractually required insurance generally included builder's risk, workers' compensation, and employer's liability insurance as well as general, contractual, and automobile liability insurance. Contractors were also required to obtain performance and payment bonds in the full amount of the construction contract. Performance bonds guarantee the University that the contract will be completed according to its terms, including price and time, in the event of default. Payment

bonds provide assurance that all suppliers, laborers, and subcontractors will be paid in the event of default. If any party to the contract defaults, the University may call upon the surety to complete the contract.

Our review of working files for 4 construction related projects disclosed that 3 projects had deficiencies related to insurance and performance and payment bonds:

a. Bio-Physical Sciences Building (authorized for \$93.0 million)

- (1) During a one-year period, the architect's contractual liability insurance coverage was \$1.0 million less than required by contract.
- (2) There was no documentation that the general contractor had purchased builder's risk insurance.

b. Shaw Hall Interior (authorized for \$9.7 million)

- (1) For a two-year period, the architect's employer and automobile liability insurance coverage was \$1.0 million less than required by contract.
- (2) For a two-year period, the architect's contractual liability insurance coverage was as much as \$2.0 million less than required by contract.
- (3) There was no documentation that the general contractor had purchased any required insurance during a one-year period.
- (4) There was no documentation that the general contractor had increased its performance and payment bonds to cover \$500,000 in contract increases resulting from change orders.

c. Bio-Physical Sciences Building Site Work (authorized for \$2.9 million)

There was no documentation that the general contractor increased its performance and payment bonds to cover \$1.2 million in contract increases resulting from change orders.



## **RECOMMENDATION**

We recommend that the University ensure that architects and construction contractors purchase and maintain insurance and performance and payment bonds required by contract.

## **AGENCY PRELIMINARY RESPONSE**

The University agrees with the recommendation. The University informed us that, since the audit was completed, it has modified the Facilities Asset Management Information System to include an improved process to monitor submittal of insurance and bond documentation by contractors and architects. The University informed us that it has also developed a new procedure for reviewing the content of insurance certificates.

## **FINDING**

### **3. Joint Capital Outlay Subcommittee (JCOS) Approval**

The University did not submit use and finance statements to JCOS for some non-State-funded capital outlay projects exceeding \$1 million. As a result, JCOS did not have an opportunity to review such projects as provided for in annual capital outlay appropriations acts.

As stated in our May 2004 report on State Universities' and Community Colleges' Submission of Use and Finance Statements, the University did not submit use and finance statements to JCOS for 17 projects exceeding \$1 million. These projects included the purchase of a building, various building maintenance and renovation projects, site improvements, technology enhancements, and parking facilities.

Capital outlay appropriations acts require that universities obtain JCOS approval prior to starting non-State-funded capital outlay projects exceeding \$1 million. This includes new construction, remodeling and additions, and maintenance projects.

## **RECOMMENDATION**

We recommend that the University submit use and finance statements to JCOS for all non-State-funded capital outlay projects exceeding \$1 million.

## **AGENCY PRELIMINARY RESPONSE**

The University agrees with the recommendation. The May 2004 report on State Universities' and Community Colleges' Submission of Use and Finance Statements included the projects that are noted in this audit report. The University informed us that, at that time, additional clarification regarding the guidelines for submitting use and finance statements were discussed. As a result, the University has submitted revised use and finance statements for the projects identified in this audit report. This finding is a duplication of information in the aforementioned report and does not represent a separate set of new findings.

## **FINDING**

### **4. Post-Evaluations of Construction Projects**

The University needs to develop more consistent and formal post-evaluations of its construction projects.

Post-evaluations would help identify performance deficiencies and best practices for consideration in future University construction projects. Post-evaluations should assess the performance of architects, engineers, general contractors, and subcontractors as well as review the University's own construction and administrative processes. A formalized methodology would include pre-determined performance criteria and a written synopsis of each evaluation. The feedback provided from such post-evaluations would be useful in enhancing the effectiveness and efficiency of future projects.

From July 1, 1999 through June 28, 2002, the University's Board of Trustees approved 108 construction and/or renovation projects totaling approximately \$182.2 million. Many of these projects involved the use of architects, engineers, general contractors, and subcontractors. Evaluations that include ratings about such things as the quality of workmanship, project management ability, and supervisory personnel are important in determining and documenting whether architects, engineers, general contractors, and subcontractors have demonstrated adherence to quality standards of their trade as well as the expectations of the University. In addition, it is important to ensure that the past performance of architects, engineers, general contractors, and subcontractors who fail to meet standards and expectations is considered when evaluating them for additional projects.

The University informed us that it completed some post-evaluation activities but did not document them.

### **RECOMMENDATION**

We recommend that the University develop more consistent and formal post-evaluations of its construction projects.

### **AGENCY PRELIMINARY RESPONSE**

The University agrees with the recommendation. The University informed us that it has enhanced its project debriefing procedure. It includes discussion of the performance of the architect and contractors. The information is shared with the design and construction staff to improve the effectiveness and efficiency of future projects as well as contractors and architects.

## **USE OF SELECTED INSTRUCTIONAL RESOURCES**

### **COMMENT**

**Audit Objective:** To assess the effectiveness and efficiency of the University's use of selected instructional resources.

**Conclusion:** We concluded that the University's use of selected instructional resources was generally effective and efficient. However, we noted a reportable condition related to sabbatical leave reports (Finding 5).

### **FINDING**

#### **5. Sabbatical Leave Reports**

The University needs to ensure that faculty members submit sabbatical leave reports as required by University policy.

Sabbatical leave reports help the University determine if the faculty members achieved their planned leave objectives and whether the sabbatical leave resulted in an effective use of University resources.

Tenured faculty members who have completed six years of full service time with the University, since their date of hire or last sabbatical leave, may submit a written request for a paid sabbatical leave that details the intended purposes, objectives, and scholarly research activities for the leave. Generally, sabbatical leaves are approved for one semester or six months with full pay or for two semesters or one year at one-half pay. University policy requires faculty members to submit a sabbatical leave report to their academic unit, which includes a written assessment and evaluation of the sabbatical leave and a summary of the leave accomplishments, within 30 days of the conclusion of their sabbatical leave.

We requested sabbatical leave reports for 9 faculty members who had completed a sabbatical leave during academic year 2000-01 or 2001-02 at a total cost to the University of approximately \$527,000. In 7 (77.8%) instances, the faculty members had not submitted a sabbatical leave report even though their leave had ended from 5 to 13 months earlier. Subsequent to our request, 6 of the 7 faculty members submitted their sabbatical leave reports.

### **RECOMMENDATION**

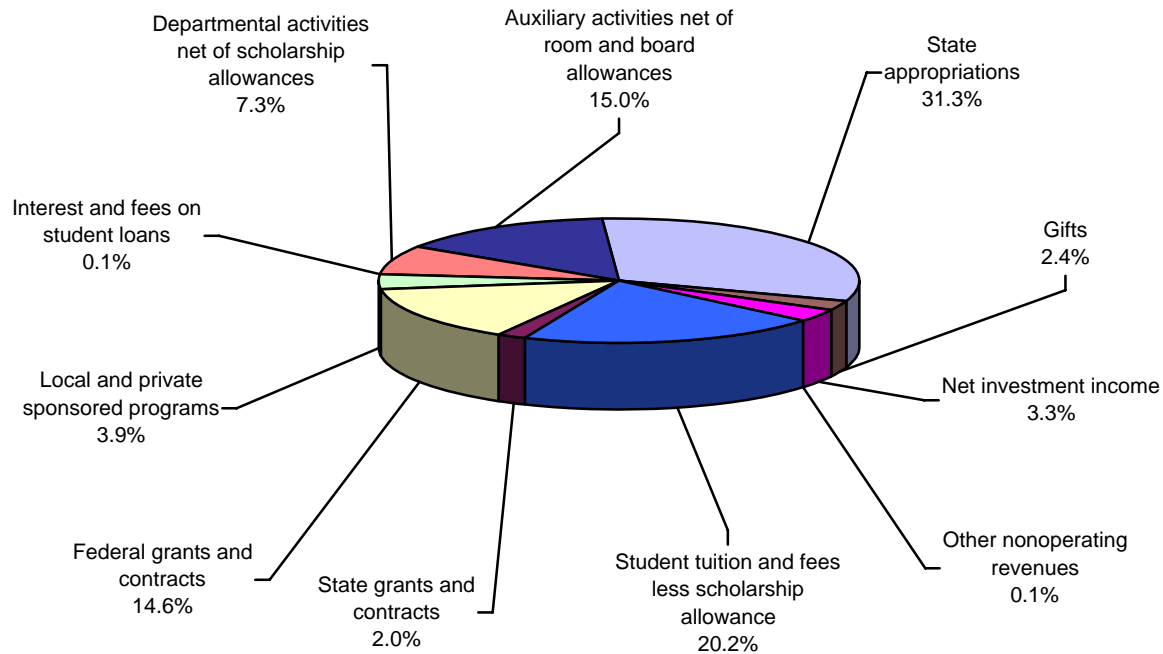
We recommend that the University ensure that its faculty members submit sabbatical leave reports as required by University policy.

### **AGENCY PRELIMINARY RESPONSE**

The University agrees with the recommendation. The University informed us that it is encouraged that the review of instructional resources, which included student records, academic programs, and personnel records, found only this procedural problem in the reporting of sabbatical leaves. The University has modified internal review procedures to ensure compliance with University policy.

## SUPPLEMENTAL INFORMATION

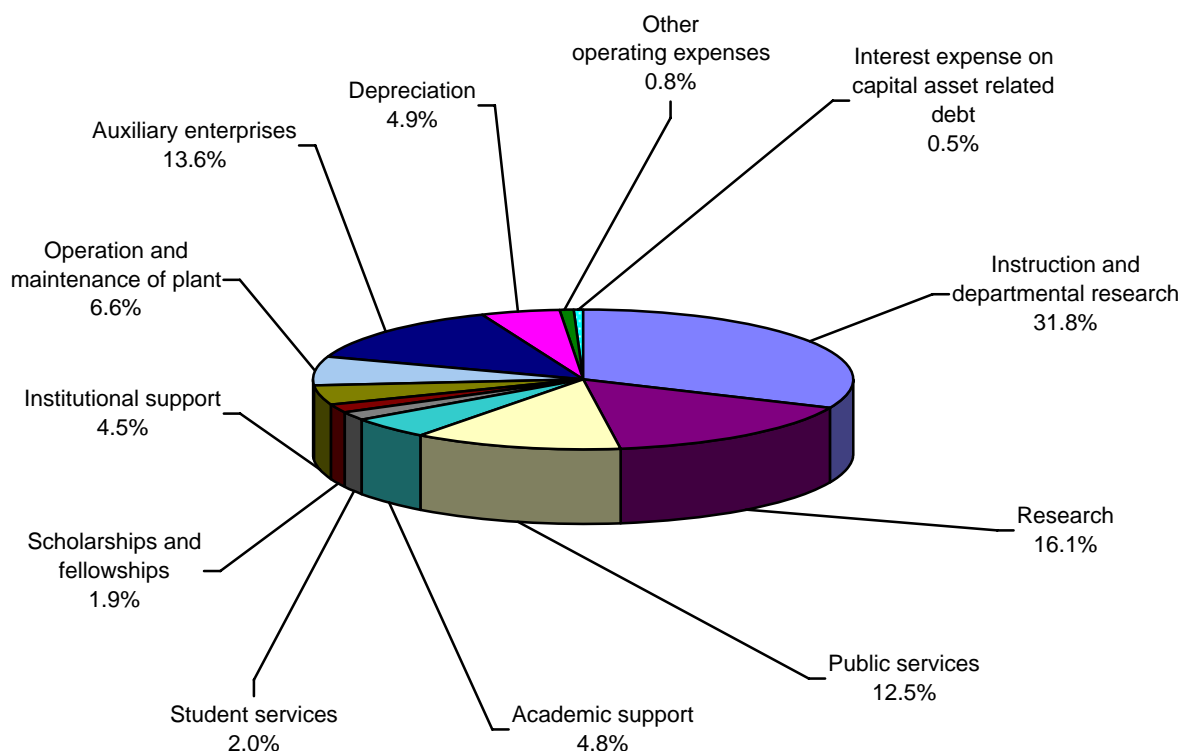
MICHIGAN STATE UNIVERSITY  
Revenues, Excluding Capital Additions  
For Fiscal Year 2001-02



	Amount
Operating Revenues:	
Student tuition and fees less scholarship allowance	\$ 254,088,644
State grants and contracts	24,908,630
Federal grants and contracts	183,373,401
Local and private sponsored programs	49,044,467
Interest and fees on student loans	879,538
Departmental activities net of scholarship allowances	91,320,556
Auxiliary activities net of room and board allowances	188,622,973
Total Operating Revenues	<u>\$ 792,238,209</u>
Nonoperating Revenues:	
State appropriations	\$ 394,613,600
Gifts	29,854,418
Net investment income	41,954,862
Other	758,072
Total Nonoperating Revenues	<u>\$ 467,180,952</u>
Total Revenues	<u><u>\$ 1,259,419,161</u></u>

Source: Michigan State University financial statements.

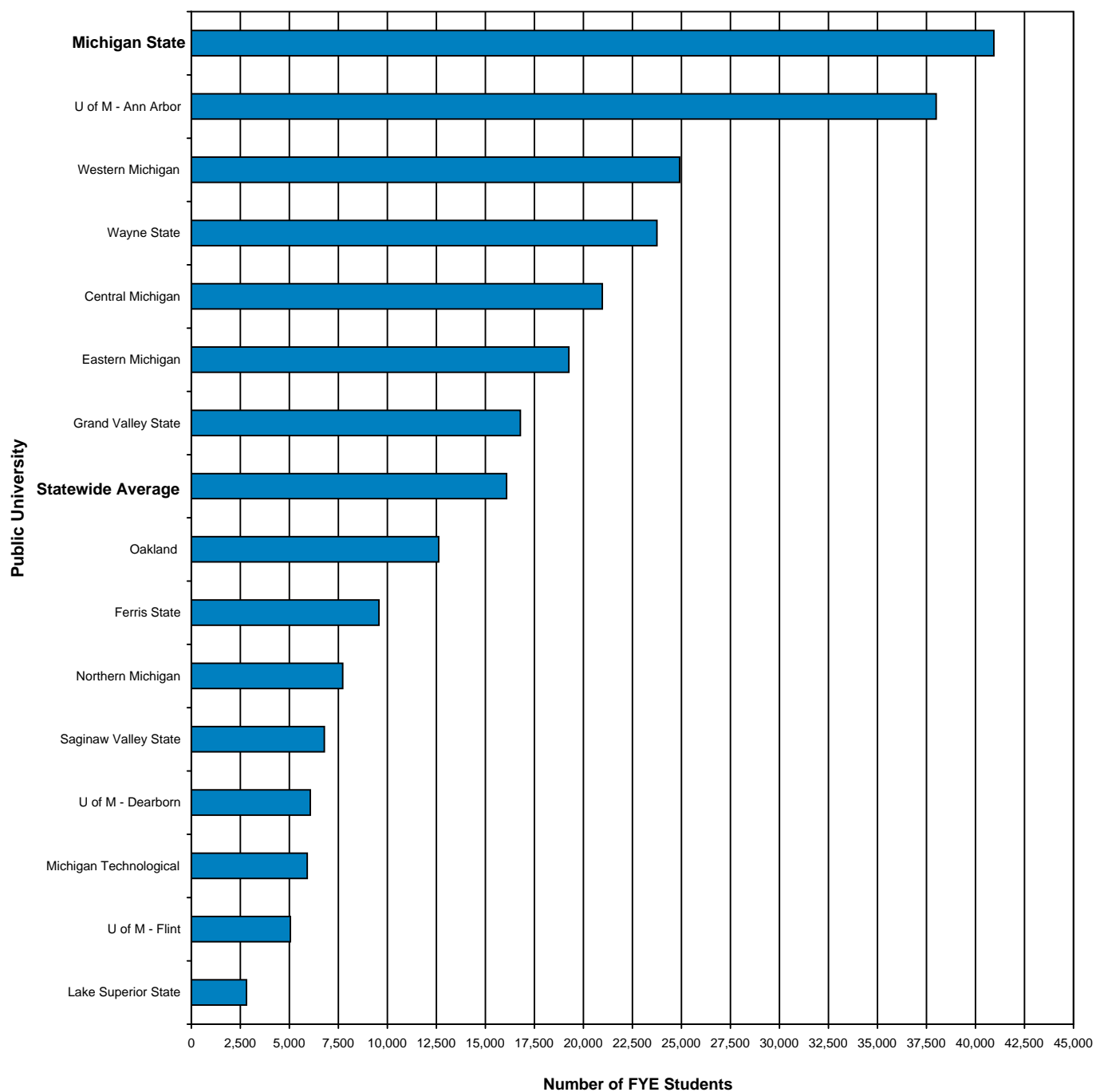
MICHIGAN STATE UNIVERSITY  
Expenses  
For Fiscal Year 2001-02



	Amount
Operating Expenses:	
Instruction and departmental research	\$ 396,841,703
Research	201,077,342
Public services	155,778,736
Academic support	60,326,358
Student services	24,530,479
Scholarships and fellowships	24,041,329
Institutional support	56,077,542
Operation and maintenance of plant	82,790,956
Auxiliary enterprises	169,432,294
Depreciation	60,589,129
Other	9,986,072
Total operating expenses	<u>\$ 1,241,471,940</u>
Nonoperating Expenses:	
Interest expense on capital asset related debt	\$ 6,658,900
Total nonoperating expenses	<u>\$ 6,658,900</u>
Total Expenses	<u><u>\$ 1,248,130,840</u></u>

Source: Michigan State University financial statements.

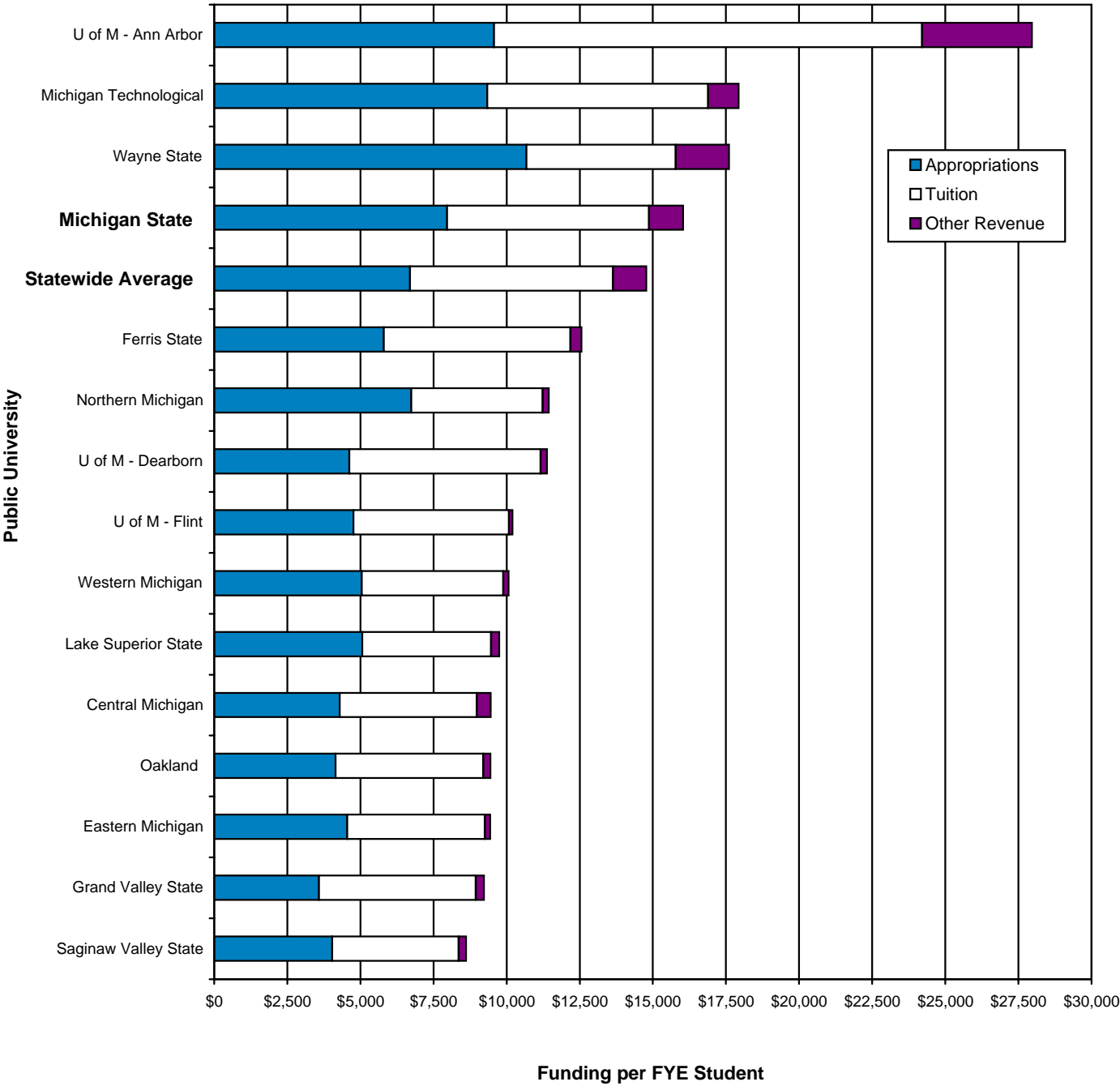
MICHIGAN STATE UNIVERSITY  
Statewide Enrollment by Public University  
For Fiscal Year 2001-02



Source: Higher Education Institutional Data Inventory (HEIDI) data.

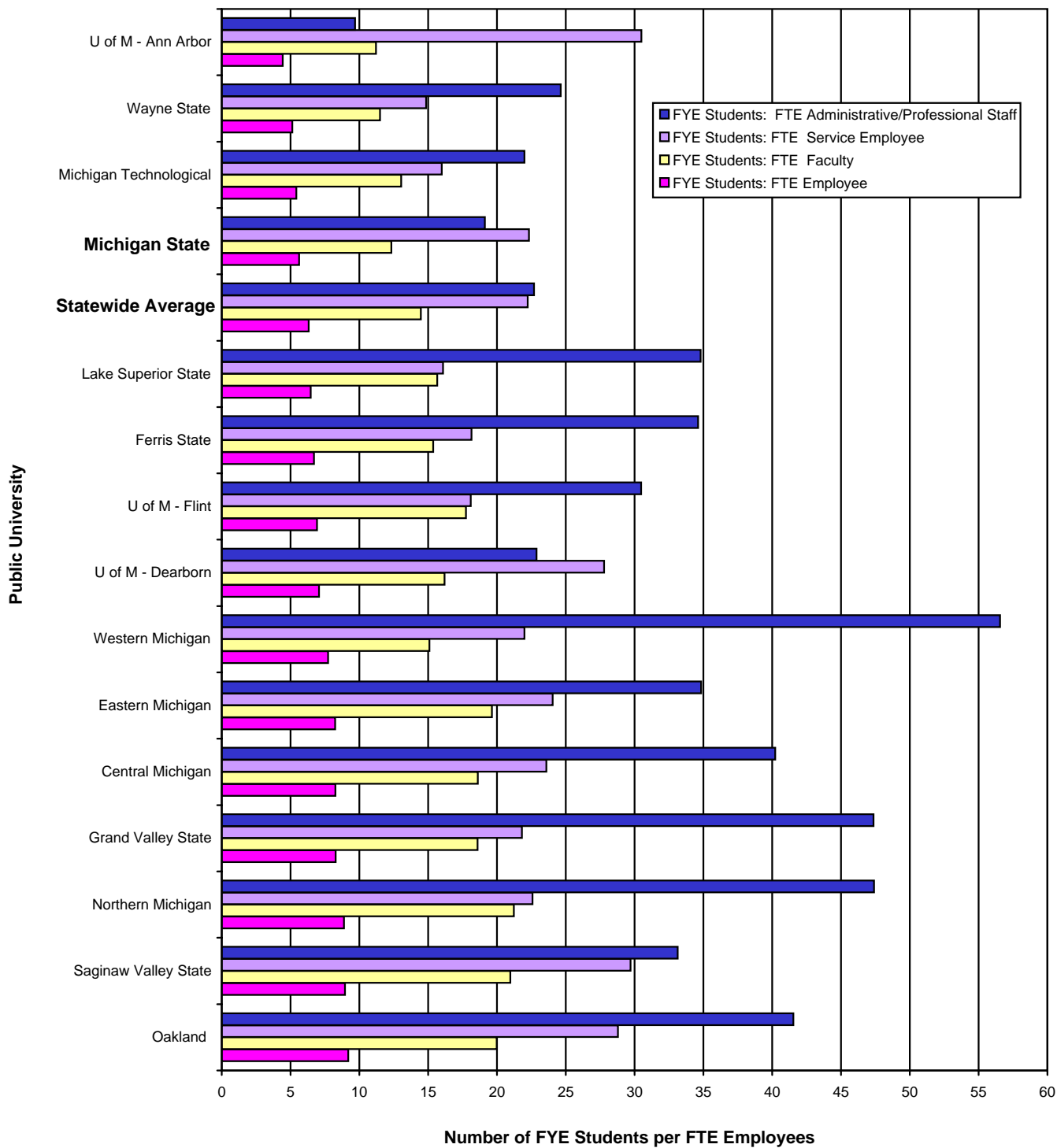


**MICHIGAN STATE UNIVERSITY**  
Per Student Funding From General Fund Sources by Public University  
For Fiscal Year 2001-02



Source: Higher Education Institutional Data Inventory (HEIDI) data.

MICHIGAN STATE UNIVERSITY  
Number of Students per Employee by Public University  
For Fiscal Year 2001-02



Source: Higher Education Institutional Data Inventory (HEIDI) data.

# GLOSSARY

## Glossary of Acronyms and Terms

academic progress	The progression toward completion of coursework required for a degree.
cost plus contract	A construction contract that limits the amount paid to the contractor's actual cost to complete the work plus an additional lump sum amount or a percentage of the actual cost for overhead and profit.
effectiveness	Program success in achieving mission and goals.
efficiency	Achieving the most outputs and outcomes practical with the minimum amount of resources.
FTE	full-time equivalent.
FYE	fiscal year equated.
JCOS	Joint Capital Outlay Subcommittee.
management control	The plan of organization, methods, and procedures adopted by management to provide reasonable assurance that goals are met; resources are used in compliance with laws and regulations; valid and reliable data is obtained and reported; and resources are safeguarded against waste, loss, and misuse.
mission	The agency's main purpose or the reason that the agency was established.
performance audit	An economy and efficiency audit or a program audit that is designed to provide an independent assessment of the performance of a governmental entity, program, activity, or function to improve public accountability and to facilitate

decision making by parties responsible for overseeing or initiating corrective action.

repetitive course  
enrollment

To enroll in a subsequent semester in the same course that a student previously has been enrolled in.

reportable condition

A matter that, in the auditor's judgment, represents either an opportunity for improvement or a significant deficiency in management's ability to operate a program in an effective and efficient manner.

U of M

University of Michigan.





